Babesiosis

Babesiosis is a tickborne disease that is caused by microscopic parasites that infect red blood cells. *Babesia microti*—which usually infects white-footed mice and other small mammals—is the main species that has been found in people in the United States. In New Jersey, approximately 93 cases of babesiosis are diagnosed annually – about 18 of which are documented from Ocean County where the disease is most commonly reported.

How is babesiosis transmitted?

Babesiosis is transmitted to humans through the bite of the deer tick, the same tick that transmits Lyme disease. The parasite typically is spread by the young nymph stage of the tick. Nymphs are most apt to be found during warm months in areas with woods, brush, or grass. Deer ticks are about the size of a poppy seed during the nymph stage, so you may not know you have a tick bite. The ticks usually must stay attached to a person for more than 24-36 hours to be able to transmit the parasite.

Babesiosis can also be transmitted through a blood transfusion. No *Babesia* tests have been licensed yet to screen US blood donors. While rare, babesiosis can be transmitted from an infected mother to her baby during pregnancy or delivery.

What are the signs and symptoms?

Many people who are infected with *Babesia microti* feel fine and do not have any symptoms. If symptoms develop, they can start within a week or so, but usually develop within a few weeks or months, sometimes longer. Some people develop flu-like symptoms, such as fever, chills, sweats, headache, body aches, loss of appetite, nausea, or fatigue. Because *Babesia* parasites infect red blood cells, babesiosis can cause hemolytic anemia (from destruction of red blood cells). This type of anemia can lead to jaundice (yellow-colored skin) and dark urine.

Who is most at risk for developing severe Illness?

Babesiosis can be a severe, life-threatening disease, particularly in people who:

§ do not have a spleen or whose spleen does not function normally;
§ have a weak immune system for other reasons (such as cancer, lymphoma, or AIDS);
§ have other serious health conditions (such as liver or kidney disease); or
§ are elderly.

Complications of babesiosis can include:

§ a low and unstable blood pressure;
§ severe hemolytic anemia (hemolysis);
§ a very low platelet count (thrombocytopenia);
§ disseminated intravascular coagulation (also known as “DIC” or consumptive coagulopathy), which can lead to blood clots and bleeding;
malfunction of vital organs (such as the kidneys, liver, lungs, and heart); or
death.

What should I do if I think I might have babesiosis?

See your health care provider. Babesiosis can be detected through a blood test. Treatment is available and most people respond well. People who do not have signs or symptoms of babesiosis usually do not need to be treated. If your doctor diagnoses you with babesiosis, you should no longer donate blood. Testing ticks is not recommended, because even if the tick is carrying a disease, you may not be infected.

Can babesiosis be prevented?

Yes. You can take steps to prevent babesiosis and other tickborne infections. The use of prevention measures is particularly important for people at increased risk for severe babesiosis (for example, people who do not have a spleen). If possible, areas infested with ticks should be avoided, especially during warm months. If such areas cannot be avoided, use protective measures during outdoor activities. No vaccine is available to protect people against babesiosis.

During outdoor activities in tick habitats, take precautions to keep ticks off the skin.

§ Walk on cleared trails and stay in the center of the trail, to minimize contact with leaf litter, brush, and overgrown grasses, where ticks are most apt to be found.
§ Minimize the amount of exposed skin, by wearing socks, long pants, and a long-sleeved shirt. Tuck the pant legs into the socks, so ticks cannot crawl up the inside of the pants. Wear light-colored clothing, to make it easier to see and remove ticks before they attach to skin.
§ Apply repellents to skin and clothing. Follow the instructions on the product label.
  o Products that contain DEET (N,N-diethylmetatoluamide) can be directly applied to exposed skin and to clothing, to help keep ticks away (by repelling them). The product label includes details about how and where to apply the repellent, how often to reapply it, and how to use it safely on children.
  o Permethrin products can be applied to clothing/boots (not to skin), actually kill ticks that come in contact with the treated clothing, and usually stay effective through several washings.

After the outdoor activities, conduct daily tick checks and promptly remove any ticks that are found. Thorough, daily tick checks are very important.

· Remove ticks from clothing and pets before going indoors.
· Conduct a full-body exam for ticks. Use a hand-held or full-length mirror to view all parts of the body. Be sure to check behind the knees, between the legs (groin/thighs), between the toes, under the arms (armpits), around the waist, inside the belly button, the
back of the neck, behind and in the ears, as well as in and around the scalp, hairline, and hair. Remember to check children and pets, too.

- Remove ticks that are attached to the skin as soon as possible, preferably by using pointed (fine-tipped) tweezers. Grab the tick’s mouth parts close to the skin, and slowly pull the tick straight out (with steady outward pressure), until the tick lets go.

More Information

Centers for Disease Control and Prevention
CDC Resources for Healthcare Professionals
Tips on avoiding ticks on people, pets, and in your yard